

FIBER REINFORCED THERMOPLASTIC PRESSURE VESSELS

ABSTRACT OF THE DISCLOSURE

1 A method of manufacturing hollow, fiber reinforced thermoplastic composite articles,
2 such as a pressure vessel, is disclosed. The thermoplastic binder is chosen to bind the
3 reinforcing fibers together, to provide strength, and to provide ease of manufacture. The
4 method includes placing a preform with an inflatable core into a mold, pressurizing the
5 inflatable core, and heating the mold to enable the thermoplastic binder to melt and distribute
6 throughout the preform, binding the reinforcing fibers. The article is then cooled and
7 removed from the mold, resulting in a hollow molded article. The inflatable core may be
8 removed from the article and reused, or the core may become an integral part of the finished
9 article.